

## Do Vietnam-Era Veterans Who Suffer from Posttraumatic Stress Disorder Avoid VA Mental Health Services?

Robert Rosenheck, MD

Alan Fontana, PhD

It has been suggested that Vietnam veterans who suffer from post-traumatic stress disorder (PTSD) avoid Department of Veterans Affairs (VA) health services because their experiences in the military engendered a profound distrust of the Federal Government and its institutions. Data from a national survey of 1,676 veterans who served during the Vietnam era show that veterans with PTSD were 9.6 times more likely than other veterans to have used VA mental health services; but only 3.3 times more likely to have used non-VA services. After controlling for other factors, veterans suffering from PTSD were 1.8 times more likely than other veterans to have used VA services, but were no more likely to have used non-VA services. Contrary to conventional belief, veterans with PTSD show a preference for VA compared to non-VA mental health services.

### Introduction

Posttraumatic stress disorder (PTSD), a potentially severe and prolonged psychiatric illness, is well established as a major consequence of war zone military service.<sup>1</sup> An epidemiological study conducted in 1988 estimated that PTSD affected 479,000 Vietnam theater veterans, 15% of the total.<sup>2</sup> Although the primary mission of the Department of Veterans

Affairs health care system is to provide treatment for illnesses like PTSD that were incurred during military service, both veterans' advocates and researchers have suggested that veterans who suffer from PTSD prefer not to use VA services because of their distrust of the Federal Government and distaste for its formal bureaucratic climate.<sup>3-8</sup> Although comprehensive health care reform was not passed during this last attempt, state reform efforts are continuing and there are many proposals to enhance the availability of health insurance among low-income people. These developments may significantly affect the demand for VA services.

In this study, we use data from a national survey of Vietnam-era veterans, the National Vietnam Veterans Readjustment Study (NVVRS)<sup>2</sup> to (1) examine lifetime utilization of VA and non-VA health and mental health services among veterans who suffer from PTSD compared to those who do not; (2) evaluate whether the expanded availability of health insurance under either national or state health care plans is likely to alter these utilization patterns; and (3) determine whether veterans with PTSD have a relative preference for or aversion to using VA services after adjustment is made for other factors that influence service utilization.

### Methods

#### Sample

The sampling frame for the NVVRS was a national screening sample of military personnel records and is described in detail

Department of Veterans Affairs Northeast Program Evaluation Center and Yale Department of Psychiatry.

Correspondence: Robert Rosenheck, M.D. (182), VA Medical Center, 950 Campbell Avenue, West Haven, CT 06516.

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in the original publications on the study.<sup>2,9</sup> Blacks and Hispanics were systematically oversampled. The subsample used for this study included all male veterans surveyed in the NVVRS who reported military service during the Vietnam era ( $N = 1,676$ ).

## Measures

### Health Service Use

Lifetime receipt of services for mental health problems was assessed through an extensive series of questions. Veterans were asked, first, if they had ever received help for a psychological or emotional problem from 18 different types of outpatient providers, including services from VA medical centers and VA Readjustment Counseling Centers (Vet Centers). They were then asked specifically about use of various types of inpatient psychiatric services. Another series of questions concerned use of general health care services.

Health services use was measured by six dichotomous variables, four concerning mental health service use and two concerning general VA health service use. Measures of lifetime mental health service comprise the dichotomous measures: (1) VA outpatient mental health services (provided by VA medical centers or VA Readjustment Counseling centers); (2) non-VA outpatient mental health services (provided by a private psychiatrist, psychologist, or social worker, community mental health center, psychiatric clinic, drug or alcohol clinic, hospital emergency room, or family service agency); (3) VA inpatient psychiatric treatment; and (4) non-VA inpatient psychiatric treatment. To compare use of VA mental health services with use of general VA medical services, two additional variables were included: (1) lifetime use of any type of VA health care; and (2) current use of VA as the veteran's usual source of medical care.

### Post-Traumatic Stress Disorder

PTSD was assessed using a cutoff score of 89 on the Mississippi scale for combat-related PTSD.<sup>2,10</sup> In an NVVRS validation study that used expert clinical interviews as its gold standard, the Mississippi scale cutoff of 89 was shown to be the most accurate of several single measures of PTSD, with a sensitivity of 82% and specificity of 87%.

### Other Factors Influencing Health Service Use

Because factors other than PTSD have been shown to influence service utilization, special attention was directed toward adjusting our estimates of relative service use among veterans suffering from PTSD for such factors. Following the framework developed by Anderson and Newman,<sup>11</sup> these factors were grouped into (1) predisposing, (2) illness, and (3) enabling factors. Measures used in this study are summarized in Table I.

**Predisposing Factors.** These are personal characteristics existing prior to the onset of illness that influence the use of health care services, including age, race, education, and exposure to war zone stress. Data on specific family background characteristics were included because of reports in the literature of their independent influence on service utilization even after other factors are considered.<sup>12</sup> A measure of family instability was composed of 11 dichotomous items covering experiences before the age of 18 such as parental separation, divorce, or death, or family income less than \$5,000 per year.<sup>13</sup> Expo-

sure of the veteran to war zone stressors was assessed by two variables: exposure to combat, measured by the Revised Combat Scale,<sup>14</sup> and participation in abusive violence.

**Illness Factors.** The perceived health problems that provide the immediate impetus toward the use of health services covered both psychopathology and physical functional impairment. Lifetime psychopathology was represented by three measures: (1) the dichotomous index of current PTSD described above; (2) a dichotomous measure indicating at least one of six lifetime psychiatric diagnoses other than PTSD, based on standard criteria from the American Psychiatric Association's Diagnostic and Statistical Manual, third edition, revised (DSM III-R)<sup>15</sup>; and (3) a dichotomous measure of lifetime substance abuse diagnosis also based on DSM III-R criteria.

All psychiatric diagnoses other than PTSD were based on DSM III-R criteria as assessed with the Diagnostic Interview Schedule, a standardized, structured diagnostic interview.<sup>16</sup>

Physical functional impairments were assessed through responses to 14 questions concerning inability to perform tasks such as driving a car, getting around the community, doing vigorous exercise, etc., that had lasted for more than 3 months. These responses were summed to create a physical impairment index (Cronbach's  $\alpha = 0.88$ ).

TABLE I  
VARIABLES, MEANS, STANDARD DEVIATIONS, AND RANGES FOR THE TOTAL STUDY SAMPLE ( $N = 1,698$ )<sup>a</sup>

	Mean	SD	Range
Service utilization			
VA mental health use	0.10	0.24	0-1
Non-VA mental health use	0.23	0.42	0-1
Lifetime VA health service use	0.32	0.46	0-1
VA is usual source of health care	0.08	0.22	0-1
Predisposing factors			
Age	42.05	6.57	29-86
Black	0.27	0.45	0-1
Hispanic	0.23	0.42	0-1
Family instability	2.82	1.89	0-11
Education	13.36	2.46	1-20
Combat exposure	5.43	5.03	0-1
Abusive violence in Vietnam	0.24	0.43	0-1
Illness factors			
PTSD	0.22	0.41	0-1
Psychiatric diagnoses	0.27	0.45	0-1
Substance abuse	0.27	0.45	0-1
Physical disability	1.10	2.20	0-14
Enabling factors			
Personal income (\$000's)	25.83	13.48	0-50
VA benefits	0.19	0.39	0-1
Insurance	0.86	0.35	0-1
Medicaid	0.02	0.14	0-1
City size <sup>b</sup>	1.93	0.90	1-3
US region			
Northeast	0.16	0.37	0-1
Midwest	0.18	0.38	0-1
South	0.38	0.49	0-1
Pacific	0.26	0.31	0-1
Puerto Rico	0.02	0.15	0-1

<sup>a</sup>Where range is 0-1, mean is equivalent to percent.

<sup>b</sup>1 < 250,000; 2 > 250,000 < 1,500,000; 3 > 1,500,000.

**Enabling Factors.** These are the financial, eligibility, and/or insurance resources needed to obtain health care services, including personal income, receipt of VA benefits (both of which affect eligibility for VA services), health insurance other than Medicaid, and Medicaid. The size of the city of residence was also included among the enabling characteristics because of the greater availability of medical services, and especially VA services, in large metropolitan areas. An additional enabling factor was the regional supply of health care services or mental health services, which has been shown to vary significantly across regions of the country.<sup>17</sup> Current residence was coded using the Census Bureau's definitions of the major U.S. regions (Northeast, Midwest, South, and West).

### Analyses

Analyses proceeded in several stages. First, descriptive data were examined on the proportion of veterans with and without PTSD who used VA services and non-VA services. Since these proportions are likely to be influenced by the relative supply of VA and non-VA mental health services, data on total services delivered per capita and on staffing resources per capita were examined<sup>18-21</sup> (Table II). The supply of VA inpatient services (bed days of care per year per veteran in the population) and inpatient professional staffing levels per veteran are about one-half the supply of non-VA inpatient services and staff per capita in the general population. The supply of VA mental health outpatient services and personnel per veteran is about one-fifth that of non-VA services. In view of these differences in service availability, comparison of the preference for VA and non-VA services cannot be based on a simple comparison of the proportions of veterans who used each type of service. Since our measures of both PTSD and service use are dichotomous variables, we used odds ratios to examine the relative

preference for VA compared to non-VA services among veterans with PTSD.

After calculating odds ratios and their 95% confidence intervals (C.I.) to determine the likelihood that veterans suffering from PTSD would use the designated VA and non-VA services, the analyses were repeated for three subgroups: (1) veterans who had ever used any formal mental health services ( $N = 426$ , 24%); (2) veterans with any lifetime psychiatric or substance abuse disorder ( $N = 913$ , 54%); and (3) veterans who reported having a regular health care service provider ( $N = 1,325$ , 80%).

Next, two sets of logistic regression analyses were used to repeat these analyses with adjustment for other factors that influence health service use. The first set of logistic regression analyses included only those factors that are likely to change as the availability of health insurance expands: access to private insurance and to Medicaid. In the second set of logistic regression analyses, additional covariates were included to adjust for the influence of predisposing, illness, and enabling characteristics as described previously. This final set of analyses considered the relationship of PTSD to VA service use independent of all other factors.

## Results

### Bivariate Analysis

Table III shows the proportion of veterans with PTSD and without PTSD who used various types of health care services. Unadjusted odds ratios and their 95% confidence intervals are also presented for use of each service by veterans with PTSD. Veterans who met criteria for PTSD were 9.6 times as likely as other veterans to have used VA mental health services, but only 3.3 times as likely to have used non-VA mental health

TABLE II  
TOTAL AND PER CAPITA SUPPLY OF VA AND ALL U.S. MENTAL HEALTH SERVICES

	Total Supply			Supply/100,000 Population (5)		
	VA	All U.S.	VA as Percentage of All U.S.	VA	All U.S.	VA as Percent of All U.S.
Mental health services (000s)						
Psychiatric beds (1)	19.5	227.9	8.6%	71.0	120.0	59.2%
Inpatient days (2)	7,425	91,407	8.1%	25.9	50.6	51.2%
Outpatient visits (2)	3,577	122,259	2.9%	12.5	67.7	18.5%
Professional staff						
Psychiatrists (3)	1,558	33,700	4.6%	5.7	17.7	32.2%
Psychologists (4)	2,282	44,715	5.1%	8.3	23.6	35.2%
Social workers (4)	4,052	77,814	5.2%	14.8	41.0	36.1%
Professional staff (inpatient)						
Psychiatrists (3)	670	11,500	5.8%	2.4	6.1	39.3%
Psychologists (4)	620	7,405	8.4%	2.3	3.9	59.0%
Social workers (4)	613	17,001	3.6%	2.2	9.0	24.4%
Professional staff (outpatient)						
Psychiatrists (3)	619	22,200	2.8%	2.3	11.7	19.7%
Psychologists (4)	554	37,310	1.5%	2.0	19.7	10.2%
Social workers (4)	529	60,812	0.9%	1.9	32.0	5.9%

Sources: (1) Redick et al., 1992, p. 27. (2) Manderscheid et al., 1994. (3) VA cost distribution report, 1989; U.S. Census Bureau, 1990, p. 102; Dial et al., 1990, p. 213. (4) VA cost distribution report, 1989; Dial et al., 1990, p. 213. (5) VA estimates based on veteran population (U.S. Census Bureau, 1990).

TABLE III  
USE OF VA SERVICES BY PTSD STATUS (N = 1,676) (ALL ODDS RATIOS  $p < 0.05$ , UNLESS OTHERWISE NOTED)

	Ever Used VA Mental Health Services (%)	Ever Used Non-VA Mental Health Services (%)	Ever Used Any VA Health Services (%)	VA is Usual Source of Health Services (%)
All veterans	9.9	22.9	32.2	8.4
PTSD	30.0	41.4	55.3	18.5
No PTSD	4.3	17.7	25.7	5.6
Odds ratio	9.6	3.3	3.6	3.9
95% C.I.	(6.7-13.0)	(2.5-4.3)	(2.8-4.6)	(2.7-5.6)
Adjusted odds ratio	9.1	3.3	3.5	3.3
95% C.I.	(6.3-13.0)	(2.6-4.3)	(2.7-4.4)	(2.3-4.8)
(insurance, etc.)				
Adjusted odds ratio	2.9	2.0	1.5	1.9
95% C.I.	(1.8-4.7)	(1.4-2.8)	(1.0-2.1)	(1.1-3.3)
(other predisposing, illness, and enabling factors)				

services. They were 3.6 times as likely as other veterans to have ever used VA health care services, and 3.9 times as likely to identify the VA as their usual source of health care. The relationship of PTSD to VA mental health and general health service use is stronger than the relationship of PTSD to equivalent non-VA health services.

Table IV presents separate analyses for VA and non-VA mental health inpatient and outpatient services. These analyses show that differences in VA and non-VA mental health service use among veterans suffering from PTSD are primarily attributable to differences in use of outpatient rather than inpatient mental health care.

Table V presents selected analyses for three subgroups of relevance: veterans who had used any mental health services, veterans with any psychiatric or substance abuse diagnosis, and veterans who report having any "usual source of health care." Trends observed in the entire sample were apparent in each of these subgroups. Among veterans who had ever used mental health services, for example, veterans with PTSD were 5.1 times as likely as others to have used VA mental health services, but only 0.3 times as likely to have used non-VA services. This difference is highly significant since the 95% confi-

dence intervals of these odds ratios do not overlap (odds ratio = 5.1 for PTSD and VA mental health services, 95% C.I. = 3.3-8.0, vs. odds ratio = 0.3 for PTSD and non-VA mental health services, 95% C.I. = 0.2-0.6).

Among veterans with any psychiatric or substance abuse diagnosis, those with PTSD were 4.7 times as likely as others to have used VA mental health services, but only 1.8 times as likely to have used non-VA mental health services. Among veterans with a usual source of care, those with PTSD were 4.3 times more likely to have VA than a non-VA provider as their source of care. In each of these analyses veterans with PTSD appear to prefer VA to non-VA services.

#### Multivariate Analyses

Adjusting for insurance coverage and geographic location resulted in only minor changes in odds ratios (see second row from the bottom in Tables III-V), suggesting that the relative preference for VA mental health treatment among veterans who suffer from PTSD is likely to continue even if health insurance becomes more readily available.

After adjustment for other predisposing, illness, and enabling factors, veterans who suffer from PTSD still demon-

TABLE IV  
USE OF VA AND NON-VA IP AND OP SERVICES BY PTSD STATUS (N = 1,676)

	Ever Used VA OP Mental Health Services (%)	Ever Used Non-VA OP Mental Health Services (%)	Ever Used VA IP Mental Health Services (%)	Ever Used Non-VA IP Mental Health Services (%)
All veterans	9.1	21.2	4.5	6.1
PTSD	27.5	36.5	13.9	18.8
No PTSD	4.0	16.9	1.8	2.5
Odds ratio	9.2	2.8	8.6	9.0
95% C.I.	(6.3-13.4)	(2.2-3.7)	(5.1-13.5)	(5.7-14.1)
Adjusted odds ratio	8.9	2.8	8.0	8.5
95% C.I.	(6.1-12.8)	(2.2-3.7)	(4.7-13.4)	(5.4-13.3)
(insurance, etc.)				
Adjusted odds ratio	3.7	1.8	2.2	2.9
95% C.I.	(2.3-6.0)	(1.3-2.6)	(1.1-4.4)	(1.6-5.3)
(other predisposing, illness, and enabling factors)				

TABLE V  
LIFETIME USE OF VA AND NON-VA MENTAL HEALTH SERVICES BY PTSD STATUS (SUBGROUP ANALYSES)

	Ever Used Mental Health Services (N = 426)		Psychiatric or Substance Abuse Diagnosis (N = 913)		Has a Usual Source of Care (N = 1,325)
	Ever Used VA Mental Health Services (%)	Ever Used Non-VA Mental Health Services (%)	Ever Used VA Mental Health Services (%)	Ever Used Non-VA Mental Health Services (%)	VA is Usual Source of Medical Care (%)
All veterans	35.9	83.3	17.1	33.4	10.6
PTSD	55.5	73.6	30.0	41.4	24.6
No PTSD	21.3	90.6	8.4	28.0	7.0
Odds ratio	5.1	0.3	4.7	1.8	4.3
95% C.I.	(3.3-8.0)	(0.1-0.6)	(3.1-6.9)	(1.4-2.4)	(2.9-6.3)
Adjusted odds ratio	5.0	0.3 ns	4.5	1.8	3.8
95% C.I.	(3.2-7.7)	(0.2-0.6)	(3.1-6.6)	(1.4-2.4)	(2.6-5.5)
(insurance, etc.)					
Adjusted odds ratio	1.8	0.6 ns	2.7	1.8	1.8
95% C.I.	(1.0-3.3)	(0.2-1.5)	(1.7-4.4)	(1.3-2.6)	(1.0-3.4)
(other predisposing, illness, and enabling factors)					

strate a tendency to prefer VA over non-VA services (see last row of Tables III-V), although this tendency is less pronounced. Other factors that influence VA service use substantially in these analyses are receipt of VA compensation and/or pension benefits (Wald chi square = 17.28,  $p < 0.0001$ ), low income (Wald chi square = 21.19,  $p < 0.0001$ ), having at least one other psychiatric disorder in addition to PTSD (Wald chi square = 5.0,  $p < 0.03$ ), and living in an urban area (and therefore in closer proximity to a VA medical center) (Wald chi square = 4.2,  $p < 0.04$ ). Low cost appears to be the most important of these other factors.

## Discussion

### Use of VA Services by Veterans with PTSD

In the decades since the end of the Vietnam War, there have been numerous descriptive accounts of the mistrustful attitudes of Vietnam veterans toward the VA medical system.<sup>3-8</sup> One of the first clinical researchers to study the adjustment problems of Vietnam veterans concluded that "our research has shown that [among Vietnam veterans] there is widespread mistrust of authority, of the US government and, in particular of the Veterans Administration. Hence there is a reluctance to go to VA hospitals".<sup>7</sup> A Harris poll conducted at about the same time found 51% of Vietnam-era veterans dissatisfied with the job the VA was doing serving their needs.<sup>22</sup> Furthermore, the first national study of the adjustment problems of Vietnam veterans, the Legacies of Vietnam study,<sup>14</sup> based on survey data gathered in 1978, concluded that "only a relatively small minority of veterans used VA facilities for medical problems."

In contrast to these reports, the data presented here do not suggest that Vietnam-era veterans with PTSD are reluctant to use either VA mental health services or VA health care services more generally. Veterans with PTSD have serious mental health problems and often serious physical problems as well,<sup>2</sup> and it is therefore not surprising that they are more likely than other veterans to have used both VA and non-VA services. Using odds ratios to compare veterans' affinity for specific pro-

viders, veterans with PTSD appear to have a significantly greater inclination to use VA compared to non-VA services, especially outpatient mental health services. Our analysis of service use among veterans who had ever used mental health services, for example, suggests that veterans with PTSD are five times more likely than other veterans to have used VA mental health services, but only one-third as likely to have used non-VA mental health services.

### Other Factors That Influence VA Service Use

Although our findings suggest a substantially greater affinity for VA compared to non-VA services among veterans with PTSD, this apparent preference could be explained by the simple fact that veterans with PTSD are more likely to be eligible for VA services since they (1) are more likely to receive VA compensation and/or pension benefits and (2) have lower incomes than other veterans.<sup>9</sup> Our analyses confirmed that these factors are the most important non-PTSD factors influencing VA service use. When logistic regression analysis was used to control for these and other factors that influence VA service use, however, the specific affinity of veterans with PTSD for VA services, although less pronounced, was still apparent.

### Have Veteran Preferences Been Changing?

One explanation for the discrepancy between the frequent assertion that Vietnam veterans are reluctant to use VA services and our data on actual utilization is that attitudes of Vietnam veterans toward the VA have changed over the years. The studies referenced at the beginning of this discussion were conducted, for the most part, in the 1970s, during the first 5 to 10 years after the end of U.S. involvement in the Vietnam conflict. The NVVRS data used in our analysis, in contrast, were collected in 1988, 15 years after the war ended. In addition to the passage of time, two other developments may have changed veteran attitudes toward the VA. In 1978, 9 years before the NVVRS was conducted, the VA established the Readjustment Counseling Service or Vet Center program,<sup>23</sup> a storefront outreach program specifically designed to improve the

accessibility and appeal of VA services for Vietnam veterans. In addition, in 1982 the Vietnam Veterans Memorial in Washington was dedicated, recognizing and honoring those who served in the Vietnam conflict and symbolically initiating the process of national healing and reconciliation.<sup>24</sup>

Three types of data, however, suggest that a change in veteran attitudes does not account for our findings. First, to evaluate the influence of Readjustment Counseling Services on total VA service use, the principal analyses reported above were conducted with the exclusion of all veterans who reported any use of Readjustment Counseling Services ( $N = 53$ ). The results of these analyses were not substantially different from those presented above.

Second, we compared the use of VA services as reported by Vietnam-era veterans in the 1979 and 1987 National Surveys of Veterans. In the 1979 survey, 11.3% of Vietnam-era veterans reported lifetime use of VA health care services.<sup>25</sup> Eight years later, in 1987, this figure had increased to 19.6%.<sup>26</sup> In addition to possible changes in veteran attitudes during this period, however, there was also a substantial expansion of VA outpatient treatment capacity. A comparable increase in VA service utilization was also observed in the next-oldest group of war-time veterans, those who served during the Korean conflict. Among these veterans, lifetime use of VA health care services increased from 11.5% in 1979 to 20.7% in 1987, virtually the same change as observed among Vietnam-era veterans. If a change in attitudes specific to Vietnam-era veterans had been responsible for the increase in VA service utilization between 1979 and 1987, we would expect the changes to be specific to veterans of that era.

Finally, VA utilization data presented in the Legacies of Vietnam study<sup>14</sup> indicate that as far back as 1978, Vietnam theater veterans used VA services two or more times as often as veterans who served during the Vietnam era but not in the Vietnam theater. Changing attitudes do not appear to account for the preference for VA services among veterans with PTSD.

#### Is There Increased Reporting of PTSD by VA Service Users?

Another possible explanation for our findings is that VA service use may, in itself, result in increased reporting of PTSD symptoms. Veterans coming to VA for mental health treatment might overreport PTSD symptoms or be especially inclined to attribute their emotional difficulties to stresses of military service. Such overreporting could be stimulated by the suggestions of VA clinicians, by VA benefits counselors, or by other veterans receiving treatment from the VA. The wish to obtain VA compensation payments might also bias symptom reports. Although we cannot entirely rule out this explanation, it seems unlikely in view of the evidence presented above that the pattern of service use identified in this study appears to have been operating as early as 1978, two years before PTSD was formally defined in the Third Edition of the American Psychiatric Association's Diagnostic and Statistical Manual<sup>15</sup> and well before PTSD was recognized as a compensable disorder.

#### VA as Special Health Care System for Veterans

We are left, therefore, with an apparent discrepancy between empirical data on VA service utilization and expert opinion on veterans' attitudes. It is useful to remember that every war is associated with administrative inefficiencies and mis-

haps, and every war incurs bitter feelings among veterans whose lives, and whose friends' lives, were placed at risk or even lost by rigid and impersonal administrative protocols or by errors in judgment of the military command. In other wars, however, and especially in World War II, these bitter memories were ameliorated by a celebrated victory and the subsequent outpouring of public appreciation and gratitude. The negative public sentiment about the Vietnam War has encouraged special attention to the negative feelings and resentments of Vietnam veterans by journalists, researchers, and the public, even though, as early as 1980, the majority of veterans reported that they had benefited from their Vietnam experience.<sup>22</sup> We do not mean to deny that many Vietnam veterans are distrustful and deeply resentful of the military, the Federal Government, and the VA, and that many have been dissatisfied with the services they received from the VA. However, it does not seem that these attitudes have diminished the inclination of veterans with PTSD to use VA services in general.

The available data do not explain why, even after we control for determinants of eligibility, health status, and economic factors, veterans with PTSD are still inclined to use VA rather than non-VA health services. We suggest that many veterans have a special identification with the VA because it was created and is maintained as a facility uniquely for them. Veterans who suffer from adverse consequences of their military service may seek VA services for the simple reason that the VA health care system was established, in principle, to care for those problems. In addition, the shared experience of war trauma among veterans, especially the experience of the deaths of comrades and friends, often generates an intense group identification and an inclination to form close post-war relationships with other veterans.<sup>27</sup> The strengthened veteran identity associated with war zone stress also may generate a particularly strong affinity for VA mental health services.

#### Implications under Health Care Reform

If insurance coverage becomes more widely available through anticipated changes in federal or state policy changes, one might think that the especially high utilization of VA services by veterans with PTSD would be curtailed. Although statistical analyses cannot definitively predict future service utilization, it is noteworthy that adjusting our analyses for the effect of health insurance and/or Medicaid coverage did not change the relationship of PTSD and VA service use to any substantial degree. It does not seem that a greater availability of health insurance would markedly change the preference of veterans with PTSD for VA services.

The major limitation of this study is that it relies on a cross-sectional, quasi-experimental design. Veterans with PTSD may differ from other veterans in ways not represented in the data that are unrelated to the diagnosis of PTSD but that may affect service use and the choice of VA as a source of health services. It would be impossible, of course, to randomly assign people to PTSD and non-PTSD conditions, and an observational design is therefore likely to be the only possible approach to the questions posed.

Two more specific limitations of this study must also be noted. Our analyses were limited to information on the occurrence of lifetime service use. Data on the quantity of lifetime VA

and non-VA service use would have added a rich additional stage to our analyses. Although these data are not available, information on outpatient service use during the 6 months prior to the NVVRS survey are. On average, veterans who received VA outpatient mental health services ( $N = 46$ , 2.7% of the sample) had 12.3 VA visits during the 6 months, whereas those who received non-VA services ( $N = 76$ , 4.5% of the sample) averaged about the same number, 12.6, of non-VA visits. A small number of veterans ( $N = 12$ , 0.7%) received both VA and non-VA services. Although the numbers of veterans are too small to permit subgroup analyses by PTSD status, they do suggest that differences in basic rates of VA and non-VA service utilization are not necessarily altered by differences in the quantity of services used.

A final limitation of the data that also bears mentioning is that all utilization data are based on veterans' self-reports, not on administrative workload records. They are thus subject to an unknown degree of recall error.

### Conclusion

Contrary to previous reports, this study suggests that veterans suffering from PTSD appear to prefer VA to non-VA health services. Although the data presented do not allow prediction of a net change in demand for VA services under health care reform, one should not expect a substantial exodus of Vietnam veterans with PTSD from VA services.

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